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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,236	05/02/2001	Jerry W. Schoen	A2714	5953

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EXAMINER
SHEEHAN, JOHN P

ART UNIT	PAPER NUMBER
1742	2

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Please find below and/or attached an Office communication concerning this application or proceeding.

T.D-2

Office Action Summary	Application No. 09/847,236	Applicant(s) SCHOEN ET AL.	
	Examiner John P. Sheehan	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) *21-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1 to 20, drawn to a method of producing a high permeability grain oriented electrical steel, classified in class 148, subclass 111.

   II. Claims 21 to 23, drawn to a method of initial annealing a high permeability electrical steel band, classified in class 148, subclass 112.

   III.. Claims 24 to 29, drawn to a method of producing a high permeability grain oriented electrical steel including a step of nitriding the decarburized steel strip, classified in class 148, subclass 111.

The inventions are distinct, each from the other because of the following reasons:

The Group I, Group II and Group II processes are distinct in that they are capable of separate manufacture, use, or sale as claimed and are patentable (novel and unobvious) over each other (though they may each be unpatentable because of the prior art), MPEP 802.01.

Should applicant traverse on the ground that the processes are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the processes to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the processes unpatentable

over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other processes.

2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and because the search required for anyone of the groups is not necessarily required for the remaining groups, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Mr. Larry Fillnow on May 23, 2002 a provisional election was made with oral traverse to prosecute the invention of Group I, claims 1 to 20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 21 to 29 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

5. Claim 7 is objected to because of the following informalities:

I. In claim 7, line 2 it appears that –of—should be inserted after "consists".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> **The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

7. Claims 1 to 20 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure that is not enabling. Rapidly cooling the steel prior to cold rolling is disclosed as critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

In the specification it is disclosed that the steel is rapidly cooled prior to cold rolling so as to ensure the formation of austenite (the paragraph bridging pages 5 and 6 of the specification). This section of the specification discloses that the rapid cooling step is essential to applicants' process. However, the claims do not recite this step.

Claim Rejections - 35 USC § 112, 2nd Paragraph

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> **The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

9. Claims 1 to 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. The claims employ the open claim language, "comprising" (for example, claim 1, line 4) which leaves the claim open to any additional components even in major

amounts (MPEP 2111.03). However, the claims also employ the term "balance" (for example, claim 1, line 6) which closes the claim to the inclusion of components other than those recited, except for impurities ordinarily associated therewith. The claims are indefinite in that in view of the use of both open and closed claim language it is not clear whether the claims are limited to only the recited components or are open to the inclusion of additional components. Applicants are advised that for the purpose of this first Office action on the merits the claims will be interpreted as open when considering the prior art. If in response to this rejection applicants state that the term "balance" (or "remainder") should be interpreted as open then the Examiner will maintain the position regarding the applied prior art as appropriate and will consider any other arguments and amendments. If applicants state the term "balance" (or "remainder") closes the composition to additional components then the Examiner will accept that definition on the record and evaluate the prior art accordingly.

II. In claim 1, line 6, it is not clear what is encompassed by the term, "residual elements". Do applicants mean impurities? If this the case then this rejection may be obviated by deleting the phrase, "residual elements" and inserting the word --impurities--.

III. In claim 1, line 9, the phrase, "said hot rolled band" lacks a clear antecedent.

IV. In claim 1, line 10, the phrase, "the hot process band" lacks a clear antecedent.

V. In claim 1, line 11, the phrase, "the band" lacks a clear antecedent. For example, does this term refer to the "band" of line 3?

VI. In claim 1, line 15, the phrase, "the annealed strip" lacks a clear antecedent. For example, does this annealed strip of line 13 or the decarburized annealed strip of line 14?

VII. In claim 15, "the manganese" lacks a clear antecedent.

VIII. In claim 16, "the tin" lacks a clear antecedent.

IX. In claim 17, "the sulfur and/or selenium" lacks a clear antecedent.

X. In claim 18, "the copper" lacks a clear antecedent.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

11. Claims 1 to 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huppi (US Patent No. 5,643,370).

Huppi teaches a method of making grain oriented electrical steel having a composition that overlaps the alloy composition recited in the instant claims (column 4, lines 10 to 26) including two specific example alloys that are encompassed by the alloy composition of the instant claims (columns 11 and 12, Table 2, Alloys N and O). Huppi teaches that the disclosed alloys have a resistivity of at least 50 micro-ohm-cm (column 4, lines 31 to 32) and an austenite volume percent of between 10 to 40 % (column 6, lines 30 to 40). Huppi also teaches a process that overlaps the instantly claimed

process steps including providing a strip having a thickness of 2.5 mm, annealing, cold rolling, annealing the cold rolled strip, decarburization annealing, coating the annealed strip and final annealing the coated strip to provide a steel with a permeability at 796 A/m of at least 1840 (column 10, line 5 to column 12, line 9; Tables 2 and 3). Huppi teaches that during cold rolling the steel alloy can be subjected to a reduction of at least 80% during the last cold rolling (column 11, line 11).

The claims and Huppi differ in that although Huppi teaches all aspects of the instantly claimed invention Huppi does not teach a specific example that embodies all aspects of the claimed invention.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy composition and properties and the process steps taught by Huppi overlap the alloy composition and properties and the process step recited in the instant claims and thereby establish a prima facie case of obviousness, In re Malagari, 182 USPQ 549 and MPEP 2144.05.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (703) 308-3861. The examiner can normally be reached on T-F (6:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone numbers for

the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

John P. Sheehan
Primary Examiner
Art Unit 1742

jps
May 24, 2002